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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,128	04/16/2001	Takeshi Kubo	614.1897C	8149
21171	7590	01/22/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			LAFORGIA, CHRISTIAN A	
			ART UNIT	PAPER NUMBER
			2131	13
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/835,128	Applicant(s) KUBO ET AL.
	Examiner Christian La Forgia	Art Unit 2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

Disposition of Claims

4) Claim(s) 1-150 is/are pending in the application:
4a) Of the above claim(s) 1-75 is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 76-150 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 16 April 2001 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,10,12 . 6) Other: _____

DETAILED ACTION

1. The preliminary amendment filed 23 August 2001 is noted and made of record.
2. Claims 1 through 150 are presented for examination.
3. Claims 1 through 75 have been cancelled as per Applicant's request.

Oath/Declaration

4. Applicant has not complied with the requirements of 37 CFR 1.63(c), since the oath, declaration or application data sheet does not acknowledge the filing of any U.S. parent application. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date.

Drawings

5. This application, filed under former 37 CFR 1.60, lacks formal drawings. The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings. In unusual circumstances, the formal drawings from the abandoned parent application may be transferred by the grant of a petition under 37 CFR 1.182.

Specification

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
7. The following title is suggested: User Authentication Using Member with Either Holes or Projections.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 76, 78, 80, 81, 84, 85, 87, 88, 90, 91, 93, 94, 97, 98, 100, 105, 107, 108, 110, 111, 114, 115, 117 through 121, 123, 124, 125, 127, 129, 136, and 142 through 150 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,970,146 to McCall et al., hereinafter McCall.

10. As per claims 76, 88, 105, 121, 129, and 136, McCall teaches an authentication apparatus comprising:

a touch sensor detecting a plurality of coordinates, input via a specifying member which specifies a plurality of discontinuous different coordinates (Figures 1 [blocks 12, 14], 2; column 4, lines 21-43);

a comparing unit comparing the plurality of detected coordinates and a plurality of registered coordinates and outputting a compared result (column 1, lines 1-24; column 4, lines 2-5); and

an authentication unit carrying out an authentication based on the compared result (column 1, lines 1-24). The touch screen disclosed in McCall corresponds to the Applicant's detector. A PIN is entered via the touch screen, which corresponds to the Applicant's coordinates. The Applicant's specifying member is drawn to entering the PIN using one's finger

on the touch screen. Authentication is disclosed in column 1, lines 1 through 24, and McCall inherently teaches that the PIN is compared with a stored PIN in order to authorize payment.

11. Regarding claims 78, 90, 107, 123, and 124, McCall teaches wherein said specifying member specifies the plurality of discontinuous coordinates by a plurality of discontinuous holes or openings, cutouts or marks (column 1, lines 8-24). McCall teaches entering a PIN via the touch screen where there are gaps between the numbers that correspond to discontinuous openings between where the user touched their finger.

12. Regarding claims 80, 93, and 110, McCall teaches wherein the specifying member is placed on a specified region of touch sensor (column 3, line 56 to column 4, line 5).

13. With regards to claims 81, 94, and 111, McCall teaches wherein the holes or openings, cutouts or marks of said specifying member are provided at arbitrary positions (column 3, line 56 to column 4, line 5).

14. Regarding claims 84, 97, and 114, McCall teaches wherein said comparing unit includes a unit part obtaining the plurality of registered coordinates from positions and registered patterns, specified by one or more arbitrary ones of the detected coordinates (column 3, line 56 to column 4, line 5).

15. Regarding claims 85, 98, 115, and 127, McCall teaches wherein said touch sensor virtually sets a keyboard at a position indicated by one or a plurality of arbitrary inputs via the

specifying member which is placed on said touch sensor and specifies the plurality of discontinuous different coordinates, and detects a code corresponding to each key located at a position where the one or plurality of arbitrary inputs are made based on the virtually set keyboard, and said comparing unit compares each detected code with registered codes (Figure 2 [block 26]; column 4, lines 21-43).

16. Regarding claims 87, 100, 117, and 128, McCall teaches wherein said touch sensor is provided in display means (Figure 1 [blocks 12, 14, 26]; column 2, lines 59-65).

17. Regarding claims 91 and 108, McCall teaches wherein said authentication step compares an order of the plurality of detected coordinates and an order of the plurality of registered coordinates and carries out the authentication based on a compared result of the orders (column 3, line 56 to column 4, line 5).

18. As per claims 118, 119, 120, and 125, McCall teaches an authentication apparatus comprising:

a touch sensor detecting a plurality of coordinates, input via a specifying member which specifies a plurality of discontinuous different coordinates (Figures 1 [blocks 12, 14], 2; column 4, lines 21-43);

a comparing unit comparing an order of the plurality of detected coordinates and an order of a plurality of registered coordinates and outputting a compared result of the orders (column 1, lines 1-24; column 4, lines 2-5); and

an authentication unit carrying out an authentication based on the compared result (column 1, lines 1-24). The touch screen disclosed in McCall corresponds to the Applicant's detector. A PIN is entered via the touch screen, which corresponds to the Applicant's coordinates. The Applicant's specifying member is drawn to entering the PIN using one's finger on the touch screen. Authentication is disclosed in column 1, lines 1 through 24, and McCall inherently teaches that the PIN is compared with a stored PIN in order to authorize payment.

19. As per claims 142, 145, and 148, McCall teaches an authentication apparatus, comprising:

a touch sensor detecting coordinates, input via a specifying member, which specifies a plurality of discontinuous different coordinates (Figures 1 [blocks 12, 14], 2; column 4, lines 21-43); and

a processing unit determining a relationship between the plurality of detected coordinates and a plurality of registered coordinates (Figure 1 [block 16]; column 4, lines 2-19).

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 77, 89, 106, 122, and 137 through 141 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,656,662 to Filliman et al., hereinafter Filliman.

22. As per claims 77, 89, and 122, Filliman teaches an authentication apparatus, comprising:

a touch sensor detecting a plurality of coordinates, input by a pointing device, via a specifying member which specifies a plurality of discontinuous different coordinates (Abstract; column 7, lines 30-62);

a comparing unit comparing the plurality of the detected coordinates and a plurality of registered coordinates and outputting a compared result (claim 9); and

an authentication unit carrying out an authentication based on the compared result (column 3, lines 4-16). The coordinates being inputted are pixels on a CRT screen and are discrete, or discontinuous. A light pen and hand are used as the two devices used to supply discontinuous coordinates. Column 3 of Filliman discloses the identification method disclosed can be applied to automated teller machines which require an authorization step. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the identification method as taught by Filliman to an authentication method.

23. As per claims 106, 137, 139, and 141, Filliman teaches computer readable storage medium storing a program to make a computer perform an authentication by:

detecting a plurality of coordinates, input by a pen, via a specifying member which specifies a plurality of discontinuous different coordinates (Abstract; column 7, lines 30-62);
comparing the plurality of the detected coordinates and a plurality of registered coordinates and outputting a compared result (claim 9); and

authenticating based on the compared result (column 3, lines 4-16). The coordinates being inputted are pixels on a CRT screen and are discrete, or discontinuous. A light pen and hand are used as the two devices used to supply discontinuous coordinates. Column 3 of

Filliman discloses the identification method disclosed can be applied to automated teller machines which require an authorization step. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the identification method as taught by Filliman to an authentication method.

24. As per claims 138 and 140, Filliman teaches user authentication method comprising:
 - a detecting step detecting a plurality of coordinates, input from a coordinate detector, via a specifying member which is independent of a detecting unit and specifies a plurality of discontinuous different coordinates (Abstract; column 7, lines 30-62);
 - a comparing step comparing the plurality of the detected coordinates and a plurality of registered coordinates and outputting a compared result (claim 9); and
 - an authentication step carrying out an authentication based on the compared result (column 3, lines 4-16). The coordinates being inputted are pixels on a CRT screen and are discrete, or discontinuous. A light pen and hand are used as the two devices used to supply discontinuous coordinates. Column 3 of Filliman discloses the identification method disclosed can be applied to automated teller machines which require an authorization step. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the identification method as taught by Filliman to an authentication method.

25. Claims 79, 82, 83, 86, 92, 95, 96, 99, 109, 112, 113, 116, and 126 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall.

26. Regarding claims 79, 92, 109, and 126, McCall does not teach which further comprises:

a judging unit judging an end of the input of the plurality of detected coordinates when an input interval of the plurality of detected coordinates is longer than a predetermined interval or the input interval of the plurality of detected coordinates is longer than an average value of the input interval. The Examiner takes official notice of the practice of “timing out” authentication procedures. It would be obvious for one of ordinary skill in the art to employ such a timeout in the invention of McCall in order to thwart brute-force combination attacks.

27. Regarding claims 82, 95, and 112, McCall does not teach wherein the specifying member is placed in a specified region which is arbitrarily movable on said touch sensor. McCall teaches that the keypad produced is displayed on the screen by a computer, see column 1, lines 13-24. McCall fails to specify a particular location for the keypad. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide for the keypad to be movable. See MPEP § 2144.04. See also *In re Japikse*, 181 F.2d 1019, 1023, 86 UPSQ 70, 73 (CCPA 1950).

28. Regarding claims 83, 96, and 113, McCall fails to teach which further comprises:
a registering unit registering user levels and a manager level which is common to all of the user levels, with respect to the plurality of registered coordinates, registered coordinate patterns or registered code values. The widespread practice of giving more managers more authority than typical users in order that they may perform tasks such as maintenance and/or repair work in addition to normal user tasks is well known and practiced in the art. It would be obvious for one of ordinary skill in the art to add this feature in McCall because the terminals

disclosed in column 1 of McCall require maintenance and supervisory authority from time to time.

29. Regarding claims 86, 99, and 116, McCall fails to disclose wherein said touch sensor detects resistances corresponding to the coordinates input from a resistor layer type touch sensor via the specifying member, and said comparing unit compares the plurality of detected coordinates and the registered coordinates by comparing the detected resistances and registered resistances. Resistor layer type touch sensors are a well-known, inexpensive type of touch sensor known in the art. It would have been obvious to one of ordinary skill at the time the invention was made to provide for a resistor type detector as it would cut down on cost, in turn saving money.

30. Claims 130 through 135 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall in view of Filliman.

31. Regarding claim 130, McCall does not teach which further comprises a pointing member, and said touch sensor detects coordinates input by said pointing device via said specifying member.

32. Filliman teaches which further comprises a pointing member, and said touch sensor detects coordinates input by said pointing device via said specifying member (column 7, lines 30-62). Filliman discloses the use of a light pen which can be drawn to the pointing member and the user's hand acts as a specifying member. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the identification method of Filliman

on the system of McCall in order to verify the identity of the entity requiring completion of the requested transaction.

33. With regards to claims 131 through 135, McCall does not teach wherein said pointing device comprises pen or a stylus.

34. Filliman teaches wherein said pointing device comprises pen or a stylus (column 7, lines 53-62).

35. Regarding claims 143, 146, and 149, McCall teaches wherein said processing unit further comprises:

a comparing unit comparing the plurality of detected coordinates and the plurality of registered coordinates and outputting a compared result, and an authenticating unit authenticating based on the compared result (Figure 1 [block 16]; column 4, lines 2-19). Authentication is disclosed in column 1, lines 1 through 24, and McCall inherently teaches that the PIN is compared with a stored PIN in order to authorize payment.

36. Regarding claims 144, 147, and 150, McCall teaches wherein said processing unit further comprises:

a comparing unit comparing an order of the plurality of detected coordinates and an order of the plurality of registered coordinates and outputting a compared result of the orders, and an authenticating unit authenticating based on the compared result (Figure 1 [block 16]; column 4,

lines 2-19). Authentication is disclosed in column 1, lines 1 through 24, and McCall inherently teaches that the PIN is compared with a stored PIN in order to authorize payment.

37. Claims 101 through 104 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,304,411 to Blodgett, hereinafter Blodgett.

38. As per claim 101, Blodgett teaches an apparatus, comprising:

a touch sensor (column 3, lines 28-46);

a user authentication card which is placed on the touch sensor when making an input for user authentication (column 2, lines 37-63), wherein the user authentication card comprises:

a plurality of perforated parts, each of perforated parts removed by punching forming a hole which is used when making an input to the coordinate detector (column 2, lines 59-62). Blodgett discloses punching completely through the laminated card. Blodgett fails to teach the perforated parts to be punched out. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide for perforated sections to be punch out, as it would make the act of punching out the parts more effective and easier to accomplish.

39. Regarding claim 102, Blodgett does not teach wherein the user authentication card further comprises:

a direction specifying unit provided at asymmetrical positions with respect to top and bottom, and right and left of the card, said direction specifying unit being formed by at least one of a hole or opening, a cutout, a change in geometrical configuration, and a printed mark. It

would have been obvious to one of ordinary skill in the art at the time the invention was made to provide for a direction as to how to insert the card, as it would prevent misreads of the card.

40. Regarding claim 103, Blodgett teaches wherein said card is made of a transparent member or a non-transparent member (Figure 1; column 2, lines 38-63).

41. Regarding claim 104, Blodgett teaches wherein said card has a shape and size approximately identical to those of a credit card (Figure 1; column 2, lines 38-63).

Double Patenting

42. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper time wise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

43. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

44. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

45. Claims 76 through 150 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 26 of U.S. Patent No. 6,367,015. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present application merely removes an element and its function. For example, claim 1 of the patent reads:

An authentication apparatus comprising:

a touch sensor detecting a plurality of coordinates, input via a specifying member which specifies a plurality of discontinuous different coordinates, wherein the specifying member is placed on a specified region of the touch sensor;

a comparing unit comparing the plurality of detected coordinates and a plurality of registered coordinates and outputting a compared result; and

an authentication unit carrying out an authentication based on the compared result, wherein the specified region is a predetermined region decided by a random number.

Claim 76 of the instant application reads:

An authentication apparatus comprising:

a touch sensor detecting a plurality of coordinates, input via a specifying member which specifies a plurality of discontinuous different coordinates;

a comparing unit comparing the plurality of detected coordinates and a plurality of registered coordinates and outputting a compared result; and

an authentication unit carrying out an authentication based on the compared result. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the elements and there functions. See MPEP § 2144.04; see also, *In re Karlson*, 311 F.2d 581, 583, 136, USPQ 184, 186 (CCPA 1963), *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

Claim Objections

46. Applicant is advised that should claim 76 be found allowable, claims 118 and 121 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).
47. Applicant is advised that should claim 88 be found allowable, claim 119 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).
48. Claim 103 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. As claim 3 states wherein said card is made of a transparent member or a non-transparent member, it covers all possible types of material the card could be made of and therefore fails to further limit the parent claim.

49. Applicant is advised that should claim 105 be found allowable, claim 120 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

50. Applicant is advised that should claim 118 be found allowable, claim 125 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

51. Applicant is advised that should claim 136 be found allowable, claim 138 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

52. Applicant is advised that should claim 137 be found allowable, claim 139 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Conclusion

53. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704. The examiner can normally be reached on Monday thru Thursday 7-5.

54. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7240.

55. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Christian LaForgia
Patent Examiner
Art Unit 2131

clf

Emmanuel L. Moise
EMMANUEL L. MOISE
PRIMARY EXAMINER
Art 2136